

(FILE 'HOME' ENTERED AT 17:02:41 ON 21 JAN 2004)

FILE 'MEDLINE, CANCERLIT, EMBASE, BIOSIS, BIOTECHDS, CAPLUS' ENTERED AT  
17:03:04 ON 21 JAN 2004

L1 146875 S HISTIDINE OR POLYHISTIDINE  
L2 2319959 S POLYMER OR PEPTIDE OR POLYPEPTIDE  
L3 250567 S HYDROPHOBIC  
L4 1060 S L3 AND L2 AND L1  
L5 1587370 S LIPID OR LIPOSOME OR VECTOR OR AMPHIPHILE OR PLASMID  
L6 106 S L5 AND L4  
L7 63 DUP REM L6 (43 DUPLICATES REMOVED)  
L8 1041258 S BRANCHED OR LINEAR  
L9 2 S L8 AND L7  
L10 2833700 S FUSOGENIC OR BINDING OR MOTIF  
L11 30 S L10 AND L7  
L12 160 S L1 AND L3 AND L10 AND L5  
L15 0 S L12 AND GENE THERPAY  
L16 6 S L12 AND GENE THERAPY  
L17 5778706 S TRANSFEC? OR TRANSFER? OR TRANSPOR?  
L18 42 S L17 AND L12  
L19 28 DUP REM L18 (14 DUPLICATES REMOVED)  
L20 1036442 S POLYMER  
L21 44 S L20 AND L1 AND L3  
L22 38 DUP REM L21 (6 DUPLICATES REMOVED)  
L23 449 S BASIC AND HYDROPHOBIC AND (POLYCATIONIC OR CATIONIC)  
L24 53 S L23 AND (DNA OR NUCLEIC)  
L25 20 DUP REM L24 (33 DUPLICATES REMOVED)

L11 ANSWER 6 OF 30 MEDLINE on STN  
 AN 97103202 MEDLINE  
 DN 97103202 PubMed ID: 8947574  
 TI Towards membrane protein design: pH-sensitive topology of **histidine**-containing polypeptides.  
 AU Bechinger B  
 CS Max-Planck-Institut fur molekulare Physiologie, Dortmund, Germany.  
 SO JOURNAL OF MOLECULAR BIOLOGY, (1996 Nov 15) 263 (5) 768-75.  
 Journal code: 2985088R. ISSN: 0022-2836.  
 CY ENGLAND: United Kingdom  
 DT Journal; Article; (JOURNAL ARTICLE)  
 LA English  
 FS Priority Journals  
 EM 199701  
 ED Entered STN: 19970128  
 Last Updated on STN: 19970128  
 Entered Medline: 19970102  
 AB **Hydrophobic** and amphipathic alpha-helices act as independent functional units in immunogenic or **fusogenic** polypeptides and constitute important structural building blocks in larger membrane proteins. In order to quantitatively assess the interactions that determine the alignment of membrane-associated alpha-helices, **hydrophobic** model peptides containing **histidine** residues at selected sites were prepared by solid-phase **peptide** synthesis. CD and solution NMR spectroscopy show that these peptides assume alpha-helical secondary structures in micellar environments. The chemical shift alterations of the **histidine** side-chain protons during pH titration experiments indicate that the pK values of the **histidine** imidazole protons range from 4.9 to 6.6 in the presence of dodecylphosphocholine micelles. 15N solid-state NMR spectroscopy was used to determine the membrane alignment of these **peptide** alpha-helices in uniaxially oriented phospholipid bilayers. The observed pH-dependent change of orientation of one of these model peptides is quantitatively described by a dynamic equilibrium governed by both electrostatic and **hydrophobic** protein-lipid interactions. The thermodynamic equations presented provide a means for the prediction of membrane protein structure and topology, as well as the future design of **peptide** channels and pharmaceuticals.

L11 ANSWER 3 OF 30 MEDLINE on STN  
 AN 1999155230 MEDLINE  
 DN 99155230 PubMed ID: 10029551  
 TI Structure analysis of a **fusogenic peptide** sequence  
 from the sea urchin fertilization protein bindin.  
 AU Glaser R W; Grune M; Wandelt C; Ulrich A S  
 CS Institut fur Molekularbiologie, Friedrich-Schiller-Universitat Jena,  
 Germany.  
 SO BIOCHEMISTRY, (1999 Feb 23) 38 (8) 2560-9.  
 Journal code: 0370623. ISSN: 0006-2960.  
 CY United States  
 DT Journal; Article; (JOURNAL ARTICLE)  
 LA English  
 FS Priority Journals  
 EM 199903  
 ED Entered STN: 19990326  
 Last Updated on STN: 19990326  
 Entered Medline: 19990316  
 AB The structure of "B18", an 18-residue **fusogenic peptide**  
 from the sea urchin fertilization protein bindin, was investigated in  
 several membrane-mimicking environments with circular dichroism and  
 nuclear magnetic resonance spectroscopy. The fully conserved  
**peptide** sequence represents the minimal functional part of the 24  
 kDa protein, which can bind to membranes and induce fusion of  
**lipid** vesicles. The B18 **peptide** undergoes a coil-helix  
 transition in the presence of TFE, showing a transient tendency to  
 self-associate. Its NMR structure in 30% TFE exhibits two helical regions  
 at either side, connected by a flexible loop. In DPC and SDS detergent  
 micelles, this loop becomes distinctly bent, presumably due to the high  
 degree of curvature of the micelles. The loop contains a  
**histidine-rich motif** for **binding** zinc, which  
 is required for the **fusogenic** function of the **peptide**.  
 Therefore, we monitored the structural response of B18 and of recombinant  
 bindin toward this ion. Like TFE, and in a mutually cooperative manner,  
 zinc induces a partially helical structure in both the **peptide**  
 and the protein. Complex formation via the **histidine** residues  
 rigidifies the flexible loop and is accompanied by self-association of the  
 molecules. The data suggest that the zinc-bound functional state is a  
 continuous amphipathic alpha-helix, bearing some resemblance to a leucine  
 zipper. Two **hydrophobic** patches on one face could favorably  
 penetrate into a membrane, while two arginines on the other face could  
 interact with **lipid** phosphate groups. The three-dimensional  
 model of the B18 sequence thus contributes to a better understanding of  
**peptide**-induced vesicle fusion in general, and of the  
**lipid**-protein interactions of sperm bindin in particular.

L16 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:903794 CAPLUS

DN 136:58784

TI Encapsulation of **plasmid** DNA (Lipogenes) and therapeutic agents  
with nuclear localization signal/**fusogenic** peptide conjugates  
into targeted **liposome** complexes

IN Boulikas, Teni

PA USA

SO PCT Int. Appl., 107 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

|      | PATENT NO.   | KIND   | DATE     | APPLICATION NO. | DATE     |
|------|--|--|----------|-----------------|----------|
| PI   | WO 2001093836  | A2   | 20011213 | WO 2001-US18657 | 20010608 |
|      | WO 2001093836  | A3   | 20021003 |                 |          |
|      | W:   | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |          |                 |          |
|      | RW:  | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG   |          |                 |          |
|      | EP 1292284   | A2   | 20030319 | EP 2001-942131  | 20010608 |
|      | R:   | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR   |          |                 |          |
|      | US 2003072794  | A1   | 20030417 | US 2001-876904  | 20010608 |
|      | JP 2003535832  | T2   | 20031202 | JP 2002-501409  | 20010608 |
| PRAI | US 2000-210925P  | P  | 20000609 |                 |          |
|      | WO 2001-US18657  | W  | 20010608 |                 |          |
| AB   | A method is disclosed for encapsulating plasmids, oligonucleotides or neg.-charged drugs into liposomes having a different <b>lipid</b> compn. between their inner and outer membrane bilayers and able to reach primary tumors and their metastases after i.v. injection to animals and humans. The formulation method includes complex formation between DNA with cationic <b>lipid</b> mols. and <b>fusogenic</b> /NLS peptide conjugates composed of a <b>hydrophobic</b> chain of about 10-20 amino acids and also contg. four or more <b>histidine</b> residues or NLS at their one end. The encapsulated mols. display therapeutic efficacy in eradicating a variety of solid human tumors including but not limited to breast carcinoma and prostate carcinoma. Combination of the plasmids, oligonucleotides or neg.-charged drugs with other anti-neoplastic drugs (the pos.-charged cis-platin, doxorubicin) encapsulated into liposomes are of therapeutic value. Also of therapeutic value in cancer eradication are combinations of the encapsulated plasmids, oligonucleotides or neg.-charged drugs with HSV-tk plus encapsulated ganciclovir. |  |          |                 |          |

L19 ANSWER 19 OF 28 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.  
 on STN  
 AN 92225220 EMBASE  
 DN 1992225220  
 TI Conserved sequence motifs in the initiator proteins for rolling circle DNA  
 replication encoded by diverse replicons from eubacteria, eucaryotes and  
 archaebacteria.  
 AU Ilyina T.V.; Koonin E.V.  
 CS Nat Center for Biotechnology Info., National Library of Medicine, National  
 Institutes of Health, 8600 Rockville Pike, Bethesda, MD 20894, United  
 States  
 SO Nucleic Acids Research, (1992) 20/13 (3279-3285).  
 ISSN: 0305-1048 CODEN: NARHAD  
 CY United Kingdom  
 DT Journal; General Review  
 FS 004 Microbiology  
 022 Human Genetics  
 LA English  
 SL English  
 AB An amino acid **motif** was identified that consists of the sequence  
 HisHydrHisHydrHydrHydr (Hydr-bulky **hydrophobic** residue) and is  
 conserved in two vast classes of proteins, one of which is involved in  
 initiation and termination of rolling circle DNA replication, or RCR (Rep  
 proteins), and the other in mobilization (conjugal **transfer**) of  
**plasmid** DNA (Mob proteins). Based on analogies with  
 metalloenzymes, it is hypothesized that the two conserved His residues in  
 this **motif** may be involved in metal ion coordination required  
 for the activity of the Rep and Mob proteins. Rep proteins contained two  
 additional conserved motifs, one of which was located upstream, and the  
 other downstream from the 'two His' **motif**. The C-terminal  
**motif** encompassed the Tyr residue(s) forming the covalent link  
 with nicked DNA. Mob proteins were characterized by the opposite  
 orientation of the conserved motifs, with the (putative) DNA-linking Tyr  
 being located near their N-termini. Both Rep and Mob protein classes  
 further split into several distinct families. Although it was not possible  
 to find a **motif** or pattern that would be unique for the entire  
 Rep or Mob class, unique patterns were derived for large subsets of the  
 proteins of each class. These observations allowed the prediction of the  
 amino acid residues involved in DNA nicking, which is required for the  
 initiation of RCR or conjugal **transfer** of single-stranded (ss)  
 DNA, in Rep and Mob proteins encoded by a number of replicons of highly  
 diverse size, structure and origin. It is conjectured that recombination  
 has played a major part in the dissemination of genes encoding related Rep  
 or Mob proteins among the replicons exploiting RCR. It is speculated that  
 the eucaryotic small ssDNA replicons encoding proteins with the conserved  
 RCR motifs and replicating via RCR-related mechanisms, such as  
 geminiviruses and parvoviruses, may have evolved from eubacterial  
 replicons.

L22 ANSWER 17 OF 38 MEDLINE on STN DUPLICATE 1  
 AN 1999019832 MEDLINE  
 DN 99019832 PubMed ID: 9801434  
 TI Erythropoietin loaded microspheres prepared from biodegradable  
 LPLG-PEO-LPLG triblock copolymers: protein stabilization and in-vitro  
 release properties.  
 AU Morlock M; Kissel T; Li Y X; Koll H; Winter G  
 CS Department of Pharmaceutics and Biopharmacy, Philipps University, D-35032  
 Marburg, Germany.  
 SO JOURNAL OF CONTROLLED RELEASE, (1998 Dec 4) 56 (1-3) 105-15.  
 Journal code: 8607908. ISSN: 0168-3659.  
 CY Netherlands  
 DT Journal; Article; (JOURNAL ARTICLE)  
 LA English  
 FS Priority Journals  
 EM 199901  
 ED Entered STN: 19990115  
 Last Updated on STN: 19990115  
 Entered Medline: 19990105  
 AB Biodegradable microspheres containing recombinant human Erythropoietin  
 (EPO) were prepared from ABA triblock copolymers, consisting of  
**hydrophobic** poly(l-lactic-co-glycolic acid) A blocks and  
 hydrophilic polyethylenoxide (PEO) B blocks. Different **polymer**  
 compositions were studied for the microencapsulation of EPO using a  
 modified double-emulsion process (W/O/W). The encapsulation efficiency  
 for EPO, ranging from 72% to 99% was quite acceptable. The formation of  
 high molecular weight EPO aggregates, however, was higher than in  
 poly(d,l-lactide-co-glycolide) (PLG) microparticles. Using different  
 excipients with known protein stabilizing properties, such as Bovine Serum  
 Albumin (BSA), Poly-l-**Histidine** (PH), Poly-l-Arginine (PA) or a  
 combination of PA with Dextran 40 (D40), the EPO aggregate content was  
 significantly reduced to <5% of the encapsulated EPO. In contrast to PLG,  
 ABA triblockcopolymers containing >7 mol % PEO, allowed a continuous  
 release of EPO from microspheres for up to 2 weeks under in-vitro  
 conditions. The release profile was comparable to FITC-Dextran 40 kDa (FD  
 40) loaded microspheres in the initial release phase, while EPO release  
 was leveling off at later time points. BSA additionally prolonged the EPO  
 release, while blends of PLG and PEO did not generate continuous EPO  
 release profiles. LPLG-PEO-LPLG triblock-copolymers (35 mol % PEO; 30  
 kDa) in combination with 5% BSA yielded both an acceptable level of EPO  
 aggregates and a continuous release profile under in-vitro conditions for  
 up to 2 weeks. The formation of EPO aggregates at later time points is  
 probably induced by acidic cleavage products of the biodegradable  
**polymer** and requires further optimization of the ABA  
**polymer** composition.

transition for the polypentapeptides.

L22 ANSWER 27 OF 38 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1992:194836 CAPLUS  
DN 116:194836  
TI Conformation-controlled hydrolysis of polyribonucleotides by sequential  
basic polypeptides  
AU Barbier, Bernard; Brack, Andre  
CS Cent. Biophys. Mol., CNRS, Orleans, 45071, Fr.  
SO Journal of the American Chemical Society (1992), 114(9), 3511-15  
CODEN: JACSAT; ISSN: 0002-7863  
DT Journal  
LA English  
AB Polycationic polypeptides contg. basic and **hydrophobic** amino  
acids strongly accelerate the hydrolysis of oligoribonucleotides. Aspects  
of the oligonucleotide-polypeptide interaction, as well as the  
relationship among amino acid compn., polypeptide conformation, and the  
hydrolytic effect were examd. To be active, the polypeptides must present  
a regular distribution in space of basic groups (.beta.-sheet or  
.alpha.-helix). A tentative model involving an alignment of the  
polynucleotide chain between two parallel rows of pos. charges is given.  
The exptl. data for the base-induced hydrolysis are consistent with a  
mechanism involving two basic amino acid side chains.

L25 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:736953 CAPLUS

DN 131:333010

TI Preparation of protein-linked lipidic microparticles with improved shelf-life using polycation-induced condensation

IN Papahadjopoulos, Demetrios; Hong, Keelung; Zheng, Weiwen; Kirpotin, Dmitri

PA The Regents of the University of California, USA

SO PCT Int. Appl., 76 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

|      | PATENT NO.      | KIND   | DATE     | APPLICATION NO. | DATE     |
|------|-----------------|--|----------|-----------------|----------|
| PI   | WO 9958694      | A1   | 19991118 | WO 1999-US10375 | 19990511 |
|      | W:              | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |          |                 |          |
|      | RW:             | GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG   |          |                 |          |
|      | US 6210707      | B1   | 20010403 | US 1998-76618   | 19980512 |
|      | CA 2330741      | AA   | 19991118 | CA 1999-2330741 | 19990511 |
|      | AU 9939834      | A1   | 19991129 | AU 1999-39834   | 19990511 |
|      | EP 1078079      | A1   | 20010228 | EP 1999-922950  | 19990511 |
|      | R:              | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI   |          |                 |          |
|      | JP 2002514432   | T2   | 20020521 | JP 2000-548485  | 19990511 |
| PRAI | US 1998-76618   | A  | 19980512 |                 |          |
|      | US 1996-30578P  | P  | 19961112 |                 |          |
|      | US 1997-967791  | A2   | 19971110 |                 |          |
|      | WO 1999-US10375 | W  | 19990511 |                 |          |

AB The present invention provides for lipid:nucleic acid complexes that have increased shelf life and high transfection activity in vivo following i.v. injection, and methods of prepg. such complexes. The methods generally involve contacting a nucleic acid with an org. polycation to produce a condensed nucleic acid, and then combining the condensed nucleic acid with a lipid comprising an amphiphilic cationic lipid to produce the lipid:nucleic acid complex. This complex can be further stabilized by the addn. of a hydrophilic polymer attached to hydrophobic side chains. The complex can also be made specific for specific cells by incorporating a targeting moiety such as a Fab' fragment attached to a hydrophilic polymer. The present invention further relates to lipidic microparticles with attached proteins which have been first conjugated to linker mols. having a hydrophilic polymer domain and a hydrophobic domain capable of stable assocn. with the microparticle, or proteins which have been engineered to contain a hydrophilic domain and a lipid moiety permitting stable assocn. with the microparticle.



## Refine Search

### Search Results -

| Terms       | Documents |
|-------------|-----------|
| L13 same L8 | 4         |

Database:

US Pre-Grant Publication Full-Text Database  
 US Patents Full-Text Database  
 US OCR Full-Text Database  
 EPO Abstracts Database  
 JPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

Search:

L15





### Search History

 DATE: Wednesday, January 21, 2004    [Printable Copy](#)    [Create Case](#)

#### Set Name Query

side by side

#### Hit Count Set Name

result set

*DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ*

|            |  |        |            |
|------------|--|--------|------------|
| <u>L15</u> | l13 same l8  | 4      | <u>L15</u> |
| <u>L14</u> | L13 same l9  | 39660  | <u>L14</u> |
| <u>L13</u> | lipid or liposome or amphiphile                              | 111917 | <u>L13</u> |
| <u>L12</u> | L11 same l8  | 1      | <u>L12</u> |
| <u>L11</u> | dna or nucleic or gene or plasmid                            | 343166 | <u>L11</u> |
| <u>L10</u> | L9 same l8   | 3      | <u>L10</u> |
| <u>L9</u>  | drug or pharmaceutical or biologi\$                          | 666697 | <u>L9</u>  |
| <u>L8</u>  | L7 with l1   | 103    | <u>L8</u>  |
| <u>L7</u>  | l3 with l5   | 13157  | <u>L7</u>  |
| <u>L6</u>  | L5 and l4  | 16626  | <u>L6</u>  |
| <u>L5</u>  | hydrophobic or valine or tryptophan or leucine or isoleucine | 208894 | <u>L5</u>  |
| <u>L4</u>  | L3 and l1  | 19640  | <u>L4</u>  |
| <u>L3</u>  | histidine or polyhistidine                                   | 41398  | <u>L3</u>  |
| <u>L2</u>  | s histidine  | 40     | <u>L2</u>  |

L1 copolymer or polymer

1881213 L1

END OF SEARCH HISTORY

First Hit

## End of Result Set

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|                     |       |
|---------------------|-------|
| Generate Collection | Print |
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L15: Entry 4 of 4

File: DWPI

May 20, 1998

DERWENT-ACC-NO: 1998-263059

DERWENT-WEEK: 200055

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TITLE: Use of anti-endotoxin synthetic peptides and anti-endotoxin antibodies - for the prophylaxis and treatment of endotoxiosis and septic shock and other conditions associated with lipopolysaccharide.

Basic Abstract Text (1):

Composition comprises (a) an endotoxin binding peptide which is a monomer, linear polymer, cyclic monomer or cyclic polymer of formula (I)  $R_1-(A-B-C)_n-R$  (I) R,  $R_1 =$  H, amino acid residue or fatty acid residue; A = Lysine, Arginine or Histidine; B = Phenylalanine, Tyrosine or Tryptophan; C = Leucine, Isoleucine or Valine;  $n = 1-100$ ; (b) a compound of formula  $(A)_n$  A = Lysine and/or Arginine;  $n = 7$  or more; (c)  $(AB)_m$  A = Lysine or Arginine; B = a hydrophobic amino acid selected from Valine, Leucine, Isoleucine, Tyrosine, Phenylalanine or Tryptophan;  $m = 3$  or more; (d)  $(ABC)_p$  A = cationic amino acid selected from Lysine and/or Arginine; B, C = hydrophobic amino acids selected from Valine, Leucine, Isoleucine, Tyrosine, Phenylalanine and Tryptophan;  $p =$  or more; and (2) an antibody specifically binding to the antigenic determinants present in the endotoxin core of different genera of Gram-negative bacteria, where the core consists essentially of Lipid A and of the immediately adjacent core oligosaccharide covalently bound to the Lipid A of the endotoxin wherein the antibody binds to the endotoxin core form at least one species of Gram-negative bacteria from each kind of endotoxin oligosaccharide core region produced by Escherichia, Salmonella, Pseudomonas, Klebsiella and Neisseria.

First Hit

Generate Collection

Print

L10: Entry 1 of 3

File: PGPB

Mar 6, 2003

PGPUB-DOCUMENT-NUMBER: 20030045465

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030045465 A1

TITLE: Histidine copolymer and methods for using same

PUBLICATION-DATE: March 6, 2003

US-CL-CURRENT: 514/12; 514/13, 514/14, 514/15APPL-NO: 10/ 018103 [PALM]

DATE FILED: November 5, 2001

[0001] This application claims the benefit of U.S. Provisional Application No. 60/173576, filed Dec. 29, 1999.

[0002] This work was supported by the National Institutes of Health (CA70394).

## PCT-DATA:



| DATE-FILED   | APPL-NO        | PUB-NO | PUB-DATE | 371-DATE | 102 (E) -DATE |
|--------------|----------------|--------|----------|----------|---------------|
| Dec 20, 2000 | PCT/US00/34603 |        |          |          |               |

## Freeform Search

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|           |   |
|-----------|---|
| Database: | US Pre-Grant Publication Full-Text Database |
|           | US Patents Full-Text Database               |
|           | US OCR Full-Text Database                   |
|           | EPO Abstracts Database                      |
|           | JPO Abstracts Database                      |
|           | Derwent World Patents Index                 |
|           | IBM Technical Disclosure Bulletins          |

|       |              |   |
|-------|--------------|---|
| Term: | L23 same l22 |  |
|       |              |  |

|          |                                 |                              |                               |                      |                                |
|----------|---------------------------------|------------------------------|-------------------------------|----------------------|--------------------------------|
| Display: | <input type="text" value="10"/> | Documents in Display Format: | <input type="text" value=""/> | Starting with Number | <input type="text" value="1"/> |
|----------|---------------------------------|------------------------------|-------------------------------|----------------------|--------------------------------|

Generate: ☐ Hit List ☒ Hit Count ☐ Side by Side ☐ Image

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### Search History

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DATE: Wednesday, January 21, 2004    [Printable Copy](#)    [Create Case](#)

#### Set Name Query

side by side

#### Hit Count Set Name

result set

*DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ*

|            |   |         |            |
|------------|---|---------|------------|
| <u>L24</u> | L23 same l22  | 13      | <u>L24</u> |
| <u>L23</u> | plasmid or gene therapy                             | 92400   | <u>L23</u> |
| <u>L22</u> | L21 same l11  | 197     | <u>L22</u> |
| <u>L21</u> | L20 with l1   | 197     | <u>L21</u> |
| <u>L20</u> | DNA binding   | 16603   | <u>L20</u> |
| <u>L19</u> | l18 same l17  | 0       | <u>L19</u> |
| <u>L18</u> | polymer   | 1671576 | <u>L18</u> |
| <u>L17</u> | l13 with l6   | 78      | <u>L17</u> |
| <u>L16</u> | L15   | 12      | <u>L16</u> |
| <u>L15</u> | L14 same l6   | 12      | <u>L15</u> |
| <u>L14</u> | L13 with l5   | 841     | <u>L14</u> |
| <u>L13</u> | l1 with l11   | 5836    | <u>L13</u> |
| <u>L12</u> | L11 same l7   | 20      | <u>L12</u> |
| <u>L11</u> | DNa or nucleic or plasmid or polynucleotide or gene | 348131  | <u>L11</u> |
| <u>L10</u> | L9 and l7   | 9       | <u>L10</u> |
| <u>L9</u>  | polylysine  | 8809    | <u>L9</u>  |

|           |                                 |         |           |
|-----------|---------------------------------|---------|-----------|
| <u>L8</u> | l6 with l7                      | 2       | <u>L8</u> |
| <u>L7</u> | l5 with l4                      | 266     | <u>L7</u> |
| <u>L6</u> | hydrophobic                     | 177055  | <u>L6</u> |
| <u>L5</u> | peptide or polypeptide          | 204456  | <u>L5</u> |
| <u>L4</u> | l2 with l1                      | 442     | <u>L4</u> |
| <u>L3</u> | linear or branched              | 1288748 | <u>L3</u> |
| <u>L2</u> | liposome or lipid or amphiphile | 111917  | <u>L2</u> |
| <u>L1</u> | histidine or polyhistidine      | 41398   | <u>L1</u> |

END OF SEARCH HISTORY

First Hit**End of Result Set**

Generate Collection

Print

L8: Entry 2 of 2

File: DWPI

May 20, 1998

DERWENT-ACC-NO: 1998-263059

DERWENT-WEEK: 200055

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TITLE: Use of anti-endotoxin synthetic peptides and anti-endotoxin antibodies - for the prophylaxis and treatment of endotoxemia and septic shock and other conditions associated with lipopolysaccharide.

Basic Abstract Text (1):

Composition comprises (a) an endotoxin binding peptide which is a monomer, linear polymer, cyclic monomer or cyclic polymer of formula (I)  $R_1-(A-B-C)_n-R$  (I) R,  $R_1$  = H, amino acid residue or fatty acid residue; A = Lysine, Arginine or Histidine; B = Phenylalanine, Tyrosine or Tryptophan; C = Leucine, Isoleucine or Valine; n = 1-100 ; (b) a compound of formula (A)<sub>n</sub> A = Lysine and/or Arginine; n = 7 or more; (c) (AB)<sub>m</sub> A= Lysine or Arginine; B = a hydrophobic amino acid selected from Valine, Leucine, Isoleucine, Tyrosine, Phenylalanine or Tryptophan; m = 3 or more; (d) (ABC)<sub>p</sub> A = cationic amino acid selected from Lysine and/or Arginine; B ,C = hydrophobic amino acids selected from Valine, Leucine, Isoleucine, Tyrosine, Phenylalanine and Tryptophan; p = or more; and (2) an antibody specifically binding to the antigenic determinants present in the endotoxin core of different genera of Gram-negative bacteria, where the core consists essentially of Lipid A and of the immediately adjacent core oligosaccharide covalently bound to the Lipid A of the endotoxin wherein the antibody binds to the endotoxin core form at least one species of Gram-negative bacteria from each kind of endotoxin oligosaccharide core region produced by Escherichia, Salmonella, Pseudomonas, Klebsiella and Neisseria.

## Hit List

|               |                     |       |          |           |
|---------------|---------------------|-------|----------|-----------|
| Clear         | Generate Collection | Print | Fwd Refs | Bkwd Refs |
| Generate OACS |                     |       |          |           |

Search Results - Record(s) 1 through 2 of 2 returned.

☐ 1. Document ID: US 20030072794 A1

Using default format because multiple data bases are involved.

L8: Entry 1 of 2

File: PGPB

Apr 17, 2003

PGPUB-DOCUMENT-NUMBER: 20030072794

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030072794 A1

TITLE: Encapsulation of plasmid DNA (lipogenes.TM.) and therapeutic agents with nuclear localization signal/fusogenic peptide conjugates into targeted liposome complexes

PUBLICATION-DATE: April 17, 2003

INVENTOR-INFORMATION:

| NAME           | CITY          | STATE | COUNTRY | RULE-47 |
|----------------|---------------|-------|---------|---------|
| Boulikas, Teni | Mountain View | CA    | US      |         |

US-CL-CURRENT: 424/450; 264/4, 435/320.1, 435/458, 514/44

|      |       |          |       |        |                |      |           |           |             |        |     |            |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|-----|------------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWC | Draw. Data |
|------|-------|----------|-------|--------|----------------|------|-----------|-----------|-------------|--------|-----|------------|

☐ 2. Document ID: EP 842666 A2, IT 1287158 B

L8: Entry 2 of 2

File: DWPI

May 20, 1998

DERWENT-ACC-NO: 1998-263059

DERWENT-WEEK: 200055

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TITLE: Use of anti-endotoxin synthetic peptides and anti-endotoxin antibodies - for the prophylaxis and treatment of endotoxicosis and septic shock and other conditions associated with lipopolysaccharide.

PRIORITY-DATA: 1996IT-MI02354 (November 13, 1996)

PATENT-FAMILY:

| PUB-NO              | PUB-DATE       | LANGUAGE | PAGES | MAIN-IPC   |
|---------------------|----------------|----------|-------|------------|
| <u>EP 842666 A2</u> | May 20, 1998   | E        | 005   | A61K039/40 |
| <u>IT 1287158 B</u> | August 4, 1998 |          | 000   | A01K000/00 |



## APPLICATION-DATA:

| PUB-NO      | APPL-DATE         | APPL-NO        | DESCRIPTOR |
|-------------|-------------------|----------------|------------|
| EP 842666A2 | November 12, 1997 | 1997EP-0203526 |            |
| IT 1287158B | November 13, 1996 | 1996IT-MI02354 |            |

INT-CL (IPC): A01 K 0/00; A61 K 38/06; A61 K 39/40; A61 K 38:06; A61 K 39/40

|      |       |          |       |        |                |      |           |  |  |        |      |        |
|------|-------|----------|-------|--------|----------------|------|-----------|--|--|--------|------|--------|
| Full | Title | Citation | Front | Review | Classification | Date | Reference |  |  | Claims | KWIC | Draw D |
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Clear

Generate Collection

Print

Fwd Refs

Bkwd Refs

Generate OACS

Terms

Documents

L6 with L7

2

Display Format: -

Change Format

[Previous Page](#)[Next Page](#)[Go to Doc#](#)

[First Hit](#)   [Fwd Refs](#)

Generate Collection

Print

L10: Entry 8 of 9

File: USPT

Mar 19, 2002

DOCUMENT-IDENTIFIER: US 6358524 B1

TITLE: Target cell-specific non-viral vectors for inserting genes into cells, pharmaceutical compositions comprising such vectors and their use

Brief Summary Text (23):

In a further preferred embodiment, a ligand (b) that binds specifically to macrophages and/or lymphocytes is selected from the group consisting of a monoclonal antibody that is specific for a membrane antigen on macrophages or lymphocytes, an intact immunoglobulin or Fc fragments of polyclonal or monoclonal antibodies that are specific for membrane antigens on macrophages and lymphocytes, cytokine, growth factor, a peptide carrying mannose terminally, protein, lipid, polysaccharide and glycoprotein from the coat of virus, in particular the HEF protein of influenza C virus having a mutation in nucleotide position 872, or HEF cleavage products of influenza C virus which contain the catalytic triad serine-71, histidine 368 or 369 and aspartic acid 261. The last named is the particularly preferred embodiment.

Brief Summary Text (39):

Cationic polypeptides and proteins, such as polylysine, protamine sulfates, histones, polyornithine and polyarginine, are also suitable as non-viral carriers, as are cationic amphiphilic lipopolyamines such as dioctadecylamidoglycylspermine (DOGS), dipalmitoylphosphatidylethanolamidosperrmine (DPPES), N-t-butyl-N'-tetradecyl-3-tetradecylaminopropionamide (diC14-amidine), DoTB, ChoTB, DoSC, ChoSC, LPLL, DEBDA, DTAB, TTAB, CTAB or TMAG, or cationic polysaccharides such as diethylaminoethyl-dextran, and also cationic organic polymers such as Polybrene.

Other Reference Publication (14):

Wagner et al., "Influenza virus hemagglutinin HA-2 N-terminal fusogenic peptides augment gene transfer by transferin-polylysine-DNA complexes: Toward a synthetic virus-like gene-transfer vehicle," Proceedings of the National Academy of Sciences of the USA, Sep. 1992, 7934-7938, vol. 89, No. 17.

[First Hit](#)   [Fwd Refs](#)

Generate Collection

Print

L15: Entry 11 of 12

File: USPT

Apr 18, 2000

DOCUMENT-IDENTIFIER: US 6051399 A

TITLE: Production of C-terminal amidated peptides from recombinant protein constructs

Detailed Description Text (7):

The leader group (Yyy) includes at least one amino acid residue. The leader group may also include a peptide, e.g., an adjunct peptide, or a cleavage site. In a preferred embodiment of the invention, the leader group includes a ligand binding protein, a highly charged peptide, an antigenic peptide, a polyhistidine-containing peptide, a hydrophobic peptide, or a DNA binding peptide. In another preferred embodiment of the invention, the leader group includes a cleavage site connected to the N-terminus of the -TargP'- target peptide.

Detailed Description Text (9):

The recombinant protein construct may also include a adjunct peptide. The adjunct peptide may be included as part or all of either the leader group (Yyy) or the tail group (Xxx). Typically, the adjunct peptide is located near the N-terminus of the construct. The adjunct peptide may aid in preventing the assimilation of the construct by the host cell during expression and may also facilitate the isolation and/or purification of the construct. The adjunct peptide may include a ligand binding protein, a highly charged peptide, an antigenic peptide, a polyhistidine-containing peptide, a hydrophobic peptide, or a DNA binding peptide. All of these types of adjunct peptides allow the recombinant protein construct to be selectively removed from other cellular components. In a preferred version of the invention, the adjunct peptide includes a carbonic anhydrase (e.g., human carbonic anhydrase) or a modified functional version thereof. Suitable carbonic anhydrase adjunct peptides and their modified functional versions are described in U.S. Pat. No. 5,595,987 the disclosure of which is herein incorporated by reference.

[First Hit](#)   [Fwd Refs](#)

Generate Collection

Print

L17: Entry 70 of 78

File: USPT

Jun 9, 1998

DOCUMENT-IDENTIFIER: US 5763209 A

TITLE: Methods and materials relating to the functional domains of DNA binding proteins

Brief Summary Text (6):

Of interest to the background of the invention is the continuously expanding body of knowledge regarding structural components involved in the binding of regulatory proteins to DNA. Illustratively, the so-called receptor proteins are believed to bind to DNA by means of zinc ion stabilized secondary structural fingers premised on the folding of continuous amino acid sequences showing high degrees of conservation of cysteines and histidines and hydrophobic residues. [Gehring (1987).] For example, a "zinc finger" domain or motif, present in Xenopus transcription factor IIIA (TF IIIA), as well as the Drosophila Kruppel gene product and various yeast proteins, involves "repeats" of about 30 amino acid residues wherein pairs of cysteine and histidine residues are coordinated around a central zinc ion and are thought to form finger-like structures which make contact with DNA. The cysteine-histidine (or "CC--HH") zinc finger motif, as opposed to a cysteine-cysteine ("CC--CC") motif of steroid receptors, is reducible to a consensus sequence represented as Cys Xaa.sub.2-4 Cys Xaa.sub.3 Phe Xaa.sub.5 Lys Xaa.sub.2 His Xaa.sub.3 His (SEQ. ID. NO: 67) wherein C represents cysteine, H represents histidine, F represents phenylalanine, L represents leucine and X represents any amino acid. [Klug et al (1987); Blumberg et al. (1987); and Schuh et al. (1986).]

First Hit

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Print

L17: Entry 78 of 78

File: DWPI

Sep 22, 1988

DERWENT-ACC-NO: 1988-285540

DERWENT-WEEK: 199718

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TITLE: Fused protein expressed as an amphiphilic alpha helical structure - comprising a target polypeptide linked to a pendant polypeptide and forming insoluble aggregates

Equivalent Abstract Text (1):

A recombinant fusion protein, or a recombinant DNA encoding said protein, said fusion protein comprising a target polypeptide linked to a pendant polypeptide which, in aqueous solution, has an amphiphilic alpha helical structure having a central axis and opposed hydrophilic and hydrophobic lateral surfaces, the hydrophobic surface comprising axially proximate nonpolar aminoacid residues and the hydrophilic surface comprising axially proximate charged aminoacid residues, said fusion protein spontaneously forming insoluble aggregates within a host organism, said pendant polypeptide comprising a proline-free polypeptide of the structure: (N-C-S-N-S-C-N)<sup>b</sup> wherein b is an integer from 1 to 30; N comprises a member selected from the group consisting of nonpolar aminoacid residues and the N's together define said hydrophobic surface; C comprises a member selected from the group consisting of charged aminoacid residues; and the C's together define said hydrophilic surface; S comprises a member selected from the group consisting of hydrophilic, neutral aminoacid residues, and wherein up to two of said N, C, and S residues may independently be histidine.